

REMARKS/ARGUMENTS

The arguments and amendments presented herein include the arguments and amendments Applicants discussed with the Examiner during the phone interview dated January 8, 2009. Applicants submit that the arguments and amendments presented herein make the substance of the phone interview of record to comply with 37 CFR 1.133. If the Examiner believes that further information on the interview needs to be made of record to comply with the requirements, Applicants request the Examiner to identify such further information.

Claim 6 is amended to depend from claim 1.

I. Claims 1-4, 6, 9, 11-13, 15, 16, 18-24, 26, 27, and 29 are Patentable Over the Cited Art

The Examiner rejected claims 1-4, 6, 9, 11-13, 15, 16, 18-24, 26, 27, and 29 as anticipated (35 U.S.C. §102) by Kracht (U.S. Patent No. 6,377,987). Applicants traverse with respect to the amended claims.

Amended claims 1, 11, 19, and 22 require: generating local topology information including information on local interfaces in a device and remote interfaces in at least one downstream remote device that connect to the local interfaces identified in the local topology information, wherein the at least one downstream remote device comprises an end device or expander connecting to further end devices or expanders to which the local interfaces connect; for each connected downstream remote interface, determining a device type of the one remote device including the remote interface; and for each local interface attached to one remote interface in one of the downstream remote devices whose determined device type is of a specified device type, initiating communication with the remote interface to access remote topology information from the downstream remote device indicating downstream devices attached directly and indirectly to the remote device, wherein the downstream devices with respect to the remote device comprise an end device or expander connecting to further end devices or expanders to which the remote device connects and wherein the communication with the remote device to access the remote topology information causes the remote device to periodically check whether the remote device gathering of the remote topology information indicating downstream devices attached directly and indirectly to the remote device has completed and to return the remote topology information to the local interface in response to determining that the gathering has completed.

Applicants amended these claims to add the requirement that the communication with the remote device to access the remote topology information causes the remote device to periodically check whether the remote device gathering of the remote topology information indicating downstream devices attached directly and indirectly to the remote device has completed and to return the remote topology information to the local interface in response to determining that the gathering has completed. These added requirements are disclosed in FIG. 5, block 164 and FIG. 7 and corresponding discussion at paras. 13 and 15 of the Specification, and certain of these requirements are also included in claim 4.

The Examiner cited col. 3, lines 52-66, col. 4, lines 8-9, col. 8, lines 8-9 and 64 to col. 9, line 7, col. 4, lines 8-9, and col. 10, lines 29-42 with respect to the pre-amended limitation concerning initiating communication (Final Office Action, pgs. 3, 8), which now recites for each local interface attached to one remote interface in one of the downstream remote devices whose determined device type is of a specified device type, initiating communication with the remote interface to access remote topology information from the downstream remote device indicating downstream devices attached directly and indirectly to the remote device, wherein the downstream devices with respect to the remote device comprise an end device or expander connecting to further end devices or expanders to which the remote device connects and wherein the communication with the remote device to access the remote topology information causes the remote device to periodically check whether the remote device gathering of the remote topology information indicating downstream devices attached directly and indirectly to the remote device has completed and to return the remote topology information to the local interface in response to determining that the gathering has completed.

The cited col. 3 mentions determining a physical topology of a network by discovering devices, creating and storing information representing the devices, determining neighboring devices for each of the devices, and processing information to eliminate devices that are not a neighbor of the devices to create information representing true neighboring devices and links. The cited col. 8 mentions determining whether a device is a hub, router or switch. The cited col. 10 discusses how a router creates an address translation table in which address information is recorded.

Although the cited Kracht discusses how configuration information on neighboring devices is determined, there is no disclosure or mention of the claim requirement that this is

accomplished by initiating communication with the remote device to access the remote topology information that causes the remote device to periodically check whether the remote device gathering of the remote topology information indicating downstream devices attached directly and indirectly to the remote device has completed and returning the remote topology information to the local interface in response to determining that the gathering has completed.

For instance, the cited Kracht discusses how configuration information is obtained from known devices, but there is no disclosure that a request or communication is sent to the remote device to cause the remote device to periodically check whether the remote device gathering of the remote topology information indicating downstream devices attached directly and indirectly to the remote device has completed and to return when the remote topology information is completed. The Examiner has not cited where Kracht discloses that the remote devices periodically check whether their address translation or topology information on connected devices is completed and then send back when it is completed.

The Examiner cited col. 3, lines 63-66, col. 4, lines 4-9, col. 11, lines 10-11 and col. 17, lines 26-27 with respect to the requirements of canceled claim 4 added to these claims involving the remote device periodically checking whether the remote topology information is completed and transmitting the remote topology information to the local device in response to determining that the remote topology information is completed. (Final Office Action, pgs. 4, 9)

The cited col. 3 mentions determining neighboring devices and storing information on the represents the topology. The cited col. 4 mentions determining neighboring devices by sending information to collect configuration information from the plurality of devices identifying network addresses received on ports of the devices. The cited col. 11 mentions discarding false information and the cited col. 17 mentions that the topology is generated based on collected and processed information.

Although the cited Kracht discusses how to gather configuration information from neighboring devices and generating topology on that, there is no disclosure or mention that the remote device, in response to the communication, periodically checks whether the gathering of the remote topology has completed and when complete the remote device sends. There is no disclosure in the cited Kracht that the neighboring devices from which information is collected wait to complete gathering their connection information by periodically checking before returning their configuration information.

Accordingly, the amend claims 1, 11, 19, and 22 are patentable over the cited art because the cited Kracht does not disclose the additional requirements of these claims.

Claims 2-9 and 11-15, 20, 21, and 23-26 are patentable over the cited art because they depend from one of claims 1, 11, 19, and 22, which are patentable over the cited art for the reasons discussed above. Moreover, the following dependent claims provide additional grounds of patentability over the cited art.

Applicants amended claim 4 to remove requirements incorporated into the independent claims.

Claims 16 and 27 are amended to recite periodically checking whether the remote topology information is completed and amended claim 27 to add the local interface to the preamble.

Amended claims 16 and 27 substantially include requirements concerning the periodically checking whether the remote topology information is completed. These requirements, among others, distinguish over the cited art for the reasons discussed with respect to claims 1, 11, 19, and 22. see, Final Office Action, pgs. 5-6.

2. Claim 10 is Patentable Over the Cited Art

The Examiner rejected claim 10 as obvious (35 U.S.C. §103) over Kracht in view of Elliot (“Information Technology – Serial Attached SCSI (SAS)”).

Applicants submit that claim 10 is patentable over the cited art because it depends from claim 10, which is patentable over the cited art for the reasons discussed above.

3. Added Claims 30-33

Added claims 30-33 depend from claims 1, 11, 19, and 22, respectively, and further require that the initiated communication with the remote device comprises only one discovery request to the remote device to cause the remote device to return the remote topology information having all downstream devices directly and indirectly connected to the remote device.

The added requirements of these claims are disclosed in at least para. 20 of the Specification.

Claims 30-33 are patentable over the cited art because they depend from base claims 1, 11, 19, and 22, which are patentable over the cited art for the reasons discussed above and because the additional requirements of these claims in combination with the base claims provide further grounds of patentability over the cited art.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-4, 6, 9-13, 15, 16, 18-24, 26, 27, and 29-33 are patentable. Should any additional fees be required beyond those paid, please charge Deposit Account No. 50-0585.

The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

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